APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,969	11/24/2003	Haim Kopylovitz	EMS-06901	5218

52427   7590   12/20/2007

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EXAMINER
LOVEL, KIMBERLY M

ART UNIT	PAPER NUMBER
2167	

MAIL DATE	DELIVERY MODE
12/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/720,969	KOPYLOVITZ, HAIM
Office Action Summary	Examiner	Art Unit
	Kimberly Lovel	2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *19 September 2007*.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) *1 and 10* is/are rejected.

7) ☐ Claim(s) *2-9 and 11-18* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This communication is in response to the Amendment filed 19 September 2007.

2.   Claims 1-18 are pending. In the Amendment filed 19 September 2007, none of the claims were amended. This Action is made Non-Final.

3.   The rejections of claims 1-9 as being unpatentable over the article "File System Design for an NFS File Server" by Hitz et al in view US Patent No 5,819,292 to Hitz et al in view of the article "A Persistent Snapshot Device Driver for Linux" by Siddha in view if the background of US Patent No. 6,460,054 to Grummon; of claims 10-16 as being unpatentable over the article "File System Design for an NFS File Server" by Hitz et al in view of US Patent No 5,812,292 to Hitz in view of the article "A Persistent Snapshot Device Driver for Linux" by Siddha; and claims 17-18 as being unpatentable over the article "File System Design for an NFS File Server" by Hitz et al in view of US Patent No 5,812,292 to Hitz in view of the article "A Persistent Snapshot Device Driver for Linux" by Siddha in view of in view if the background of US Patent No. 6,460,054 to Grummon have been withdrawn as necessitated by Applicant's arguments.

Double Patenting

4.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5.   **Claims 1 and 10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4 and 15 of U.S. Patent No. 7,266,572 in view of US Patent No 6,948,039 to Biessener et al (hereafter Biessener).**

Application: 10/720,969 Claim 1	Patent: 7,266,572 Claims 1 and 4
1. A method of restoring data to a first storage device, comprising:	1. A method of restoring data, comprising:
providing data in *the first storage device* at	providing data in a first storage area of a

a first storage area of a first type that contains sections of data;	first type that contains sections of data;
providing data in *a second storage device* at a second storage area of a second type **wherein the second type is a virtual storage area** that has, for each section of data thereof, at least one of: a pointer to a corresponding section of data of the first storage area and a pointer to corresponding section of data of *a third storage device* at a third storage area of the first type, wherein prior to writing new data to a section of the first storage area pointed to by a pointer of the second storage area, data of the section of the first storage area is copied to a section of the third storage area and the pointer of the second storage area is adjusted to point to the section of the third storage area;	providing data in a second storage area of a second type wherein the second type has, for each section of data thereof, a pointer to a corresponding section of data of the first storage area of the first type or a pointer to corresponding section of data of a third storage area of the first type and wherein the third storage area contains data that was copied from the first storage area prior to a first write to the first storage area after establishing the second storage area; and
providing data in a fourth storage device having at least one other storage area of the second type; and	

for each particular section of data of the second storage area having a pointer to the third storage area, providing to a corresponding section of the first storage area an indirect pointer to a corresponding section of the third storage area if no storage areas of the at least one other storage area point to the corresponding section of the first storage area.	for each particular section of data of the second area having a pointer to the third storage area, replacing a corresponding section of the first storage area with a pointer to the third storage area to restore the data at the first storage area to a state thereof that existed prior to establishing the second storage area.
	4. A method, according to claim 1, wherein the *storage areas are devices*.

The claim from Application 10/720,969 recites the limitations "wherein the second type is a virtual storage area" and "providing data in a fourth storage device having at least one storage area of the second type." The claim from US Patent 7,266,572 fails to explicitly recite these limitations.

Biessener discloses a system for data backup and restoration having one or more physical storage devices and virtual storage areas (see abstract and column 4, lines 40-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the second type recited by the claim from US Patent 7,266,572 a virtual storage area. One would have been motivated to do so in order to provide a

system that has the capability to backup and restore data in a manner that appears instantaneous to a user.

Also, it would have been obvious to add a fourth storage device having at least one storage area of the second type to the first, second and third storage devices of the claim from US Patent 7,266,572. One would have been motivated to do so since adding a fourth storage device containing data of the second type is just a duplication of the second device which is merely a duplication of parts. It has been held by the courts that a mere duplication of parts has no patentable significance unless a new and unexpected result is produced (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)). In this instance, adding a fourth device fails to provide a new and unexpected result.

Application: 10/720,969 Claim 10	Patent: 7,266,572 Claim 15
10. Computer software, provided in a computer-readable storage medium, that restores data to a first storage area of a first type that contains sections of data from a second storage area of a second type that is a virtual storage area that has, for each section of data thereof, at least one of: a pointer to a corresponding section of data of the first storage area and	15. A computer program, stored on a computer-readable storage medium that restores data, in connection with a system that provides data in a first storage area of a first type that contains sections of data and provides data in a second storage area of a second type wherein the second type has, for each section of data thereof, a pointer to a corresponding section of

a pointer to corresponding section of data of a third storage area of the first type where there is at least one other storage area of the second type, the software comprising: executable code that, prior to writing new data to a section of the first storage area pointed to by a pointer of the second storage area, copies data of the section of the first storage area to a section of the third storage area and adjusts the pointer of the second storage area to point to the section of the third storage area; executable code that iterates through each section of the second storage area; and executable code that provides to a corresponding section of the first storage area an indirect pointer to a corresponding section of the third storage area if no storage areas of the at least one other storage area point to the corresponding section of the first storage area.

data of the first storage area of the first type or a pointer to corresponding section of data of a third storage area of the first type wherein the third storage area contains data that was copied from the first storage area prior to a first write to the first storage area after establishing the second storage area, the program comprising: executable code that, for each particular section of data of the second storage area having a pointer to the third storage area, replaces a corresponding section of the first storage area with a pointer to the third storage area to restore the data at the first storage area to a state thereof that existed prior to establishing the second storage area.

The claim from Application 10/720,969 recites the limitation "wherein the second type is a virtual storage area." The claim from US Patent 7,266,572 fails to explicitly recite these limitations.

Biessener discloses a system for data backup and restoration having one or more physical storage devices and virtual storage areas (see abstract and column 4, lines 40-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the second type recited by the claim from US Patent 7,266,572 a virtual storage area. One would have been motivated to do so in order to provide a system that has the capability to backup and restore data in a manner that appears instantaneous to a user.

Allowable Subject Matter

6.   The following is a statement of reasons for the indication of allowable subject

matter:

In the Examiner's Non-Final Office Action dated 18 June 2007, claims 1-18 were

rejected under 35 USC 103 based primarily on the article "File System Design for an

NFS File Server by Hitz;" US Patent No 5,819,292 to Hitz et al; the article "A Persistent

Snapshot Device Driver for Linux" by Siddha; and the background of US Patent

6,460,054 to Grummon.

In the Remarks filed 19 September 2007, concerning independent claims 1 and

10, the Applicant specifically emphasized that Hitz does not show, teach or suggest the

feature where, in response to a write to a section of the stored data pointed to by a

pointer of the table of the virtual storage area, data is copied from the storage data to a

section of another storage area prior to the write and the pointer is caused to point to

the other storage area. The Applicant goes on to state the following: "Hitz discloses

that, when data is written to the file system, the data is copied to a new location (e.g.,

copied from the old block 1818 to the new block 1824 in Figure 18C) and the device to

which the write occurred is made to point to the new data block 1824. Thus, unlike

Applicants' claimed invention where the virtual device points to the moved old data, Hitz

teaches the opposite where the original device to which the write is being made points

to a different block that is allocated.

An updated search for prior art on the EAST database and on domains (NPL-

ACM, Google, IEEE) has been conducted. The prior art searched and investigated in

the database and domains does not fairly teach or suggest the teaching of the claimed

subject matter as described above and reflected by the combined elements in each of

the independent claims 1 and 10.

The dependent claims 2-9 and 11-18 depending on independent claims 1 and 10

respectively, are also distinct from the prior art for the same reason.

7.   As allowable subject matter has been indicated, applicant's reply must either

comply with all formal requirements or specifically traverse each requirement not

complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly Lovel
Examiner
Art Unit 2167

5 December 2007
kml
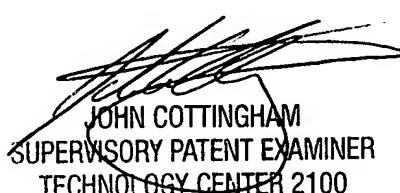
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